

AMERICAN BEE JOURNAL



APIARY OF M. MARENCO, OF ALGERIA, AFRICA.



APIARY OF MR J. W. H. KELTING, OF HOLLAND, EUROPE.



American Bee Journal



PUBLISHED WEEKLY BY
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- 1st.—To promote the interests of its members.
- 2d.—To protect and defend its members in their lawful rights.
- 3d.—To enforce laws against the adulteration of honey.

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As ever yours, E. D. TOWNSEND.

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Because the bees like it best and accept it more readily.

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American Bee Journal

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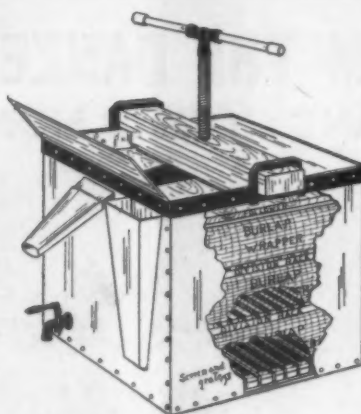
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Fire Sale of Bee and Poultry Supplies

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Established 1889.

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The secret is not a deep one—good service, fair treatment, honesty, square dealing—call it by whatever name you please. It is the golden rule of business that many business men know but forget to apply.

When an order is received at this establishment it is attended to immediately. When goods are packed for shipment they are carefully inspected, and whatever is defective thrown out.

Knowing how easily such goods are damaged in handling I use extreme care in packing, and try to make my goods proof against the



roughest freight roustabout, and fool-proof as well.

These methods are slow business builders, and not very spectacular, but they are sure.

I carry a full line of bee-supplies, and sell Root's goods at Root's prices, saving freight and time in transit.

I buy beeswax, and pay the highest market price, in cash or trade, as you prefer. Send it in and mark your name on the package. Get my new catalog—it's free.

Albion, Ind., April 2, 1907.

WALTER S. POWDER, Indianapolis.

Dear Sir:—The two nuclei which you sent me last year have wintered successfully. One is now a full colony, the other not quite so strong, but the prospects for increase are excellent, as they are busy gathering pollen.

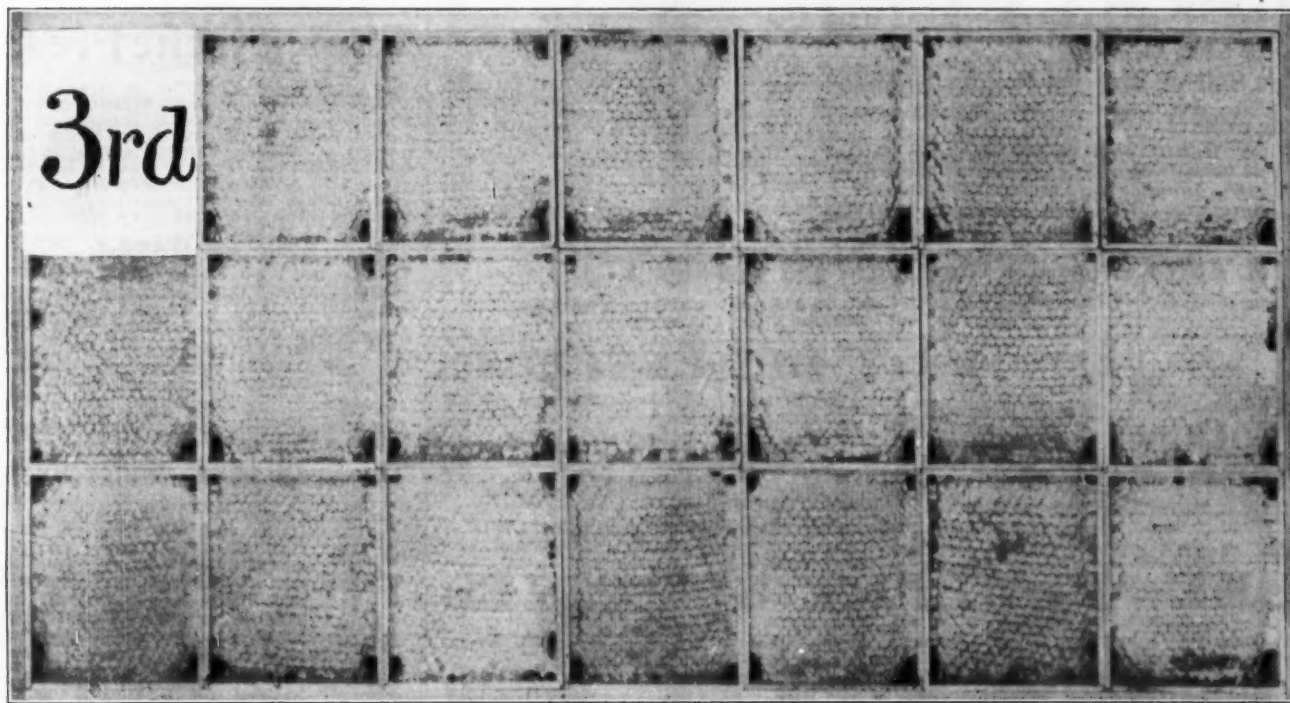
Respectfully,

MRS. J. D. BLACK.

Walter S. Pouder 513-515 Massachusetts Avenue
INDIANAPOLIS, INDIANA

American Bee Journal

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More Honey

(That is, more honey in the super at the right time.)

Better Honey

(More honey that will grade fancy and extra fancy.)

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(No question but what the producer of a fancy and extra fancy grade gets a better price, and does it easier.)

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* These dealers buy our goods in carload lots but supplement them with local-made goods.

THE A. I. ROOT CO., Medina, Ohio



(Entered at the Post-Office at Chicago as Second-Class Mail-Matter.)

Published Weekly at \$1.00 a Year, by George W. York & Co., 334 Dearborn Street.

GEORGE W. YORK, Editor

CHICAGO, ILL., APRIL 18, 1907

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Fertilizing-Hives for Queen-Rearing

Probably there is very little dissent in any quarter from the belief that to get the best queens the queen-cells should be started by a strong force of bees, and continued under such care at least until the cells are sealed. This can be the more readily afforded, as up to the time the first young queen emerges a number of cells can be cared for by the same lot of bees. But after a young queen emerges from her cell, and from that time till she begins to lay, she does not cheerfully brook the presence of anything in the shape of a rival; and, moreover, there does not seem the same need of a strong force of bees as during the earlier period of her development, so fertilizing-hives much smaller than the ordinary hive have been used, or else a full-sized hive without the full complement of frames.

While some are confident that so-called baby nuclei, with no more combs—surface than that of a one-pound section, will produce as good results as anything larger, others are skeptical. Even among the ranks of those who were at first enthusiastic as to baby nuclei, there are those who seem to have a leaning toward something larger; one of them, Mr. E. R. Root, now advocating something by no means so "baby" as it might be. Instead of a single comb the size of a pound section, he now advocates two combs, each of them one-third the size of a Langstroth frame. This is getting back very nearly to the small fertilizing-hives used by Adam Grimm and others more than 40 years ago. Mr. Root has virtually a larger mass of bees by having two of these nuclei side by side in the same hive, thus giving the advantage of mutual heat.

While some say success can not be attained with a very small quantity of bees, it is hard to dispute the word of honest men who say

they have succeeded. "Locality" is that pervading something which explains a great many discrepancies; why may it not account for different views in the present case? In other words, may it not be that in the warmer regions, as in the South, a smaller number of bees are needed to keep up the proper heat? Or is there some other way to account for the differences in results?

A Cheap Weed-Killer

Salt is sometimes used to kill the grass and weeds in front of hives, but in some places it has the objection that it attracts cattle and horses. Here is something not open to the same objection, and, at a cent a gallon, cheaper, as given by A. H. in the British Bee Journal:

The cheapest I know of is: Two ounces of carbolic acid (98 percent) to $1\frac{1}{2}$ gallons of water, preferably hot water. This is also an excellent vermin-killer, and the cost for 120 gallons 5s., or $\frac{1}{2}$ d. per gallon. This will destroy even thistles and nettles, and the seeds, too.

Ventilation of the Hive

Prof. Cook says this in *Gleanings in Bee Culture*:

The bees ventilate so effectively, as they fan the hive-entrance, that it is found entirely unnecessary to arrange for any further ventilation. It is, without doubt, best to have only the one opening to the hive. In the bee-tree or rock cavity the bees have but this one opening, and yet from their great activity they must have great drafts of pure air, and so they have developed their ventilating habit, which is very perfect. Without doubt we serve them best when we leave the matter of ventilation entirely with the bees, only arranging to give them an ample opening.

The novice, upon reading the paragraph, will feel that he need give no care to the

matter of ventilation, only so that the bees have an ample opening for an entrance, but he is likely to feel a little uncertain as to what is meant by an ample opening. If he has been accustomed to box-hives with 2 or 3 notches in front, making the equivalent of a square inch and a half or less as the entrance, his idea of an ample opening may be rather unsatisfactory to the bees.

In actual practise, the opening during hot weather varies from the size mentioned all the way up to 2 inches deep the entire width of the hive, while some raise the hive on blocks so as to make an opening on all 4 sides. But not all are agreed that only one opening is best. It is argued by some that it saves labor for the bees if there is an opening at top as well as bottom. Certain it is that in that case there will be a change of air in the hive without effort on the part of the bees whenever it is warmer in the hive than out—just so certain as that there will be a draft up a chimney whenever there is a fire at the lower end.

Will not that automatic change of air be a saving of labor for the bees, or does the instinct for making the air go in and out of the same hole hold them in so strong a grip that it will only make extra labor for them to keep the air from going through the second hole?

It might also be urged against an upper opening that in some localities the nights are so cool that ventilation is a damage, and the colder the night the stronger the current of air through the hive, and against this current the bees are helpless.

An Industrious Bee

The correctness of the general belief as to the industry of the bee having been called in question, Allen Latham comes to its defense in the *American Bee-Keeper*, and gives the following remarkable instance:

There were thrown out from a hive late one afternoon and early evening a hundred or more dead and dying bodies of some stranger bees. They lay in front of the hive, scattered over a space of 2 or 3 square feet, some having crawled before dying not less than 2 feet from the hive. The following morning, while standing by the hive, I saw a bee tugging at a dead worker on the ground. She pulled this way and that, and finally, by a great effort, mounted with her burden and disappeared in

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the distant air. I naturally thought that she had just brought the dead bee from the hive, but in less than a minute back she came and hovered about the ground as if in search of something. Then alighting by another dead body she grasped and pulled at that, and flew away with it. Again and again I saw her repeat this act, never once entering the hive; never once seeking the society of her living sisters, but plodding away by herself, clearing the ground in front of the hive of the dead bodies. Later on another bee joined in the task, and a few hours later, when I took note of the progress of the work, I found the ground completely cleared of the dead bees that had been thrown there the evening before.

The task was a self-imposed task. An amount of work was done which relatively

would be beyond the possibilities of the strongest human being. It would only be fair to say that to do a proportionate amount of work a man would need to carry 50 bodies of his fellow men to the top of a high hill in a space of 3 hours.

That a bee should drag out of the hive the dead body of one of its comrades, even should it continue to struggle with it after some yards from the hive, would seem nothing very strange; but a bee that would return again and again after the dead bodies lying entirely outside of the hive, with never a word of cheer from its sisters, certainly can not be called lazy.

Getting New Subscribers for the American Bee Journal is something every reader can do if he makes a sincere attempt. No one knows better than does he its value to every would-be successful bee-keeper. And we offer valuable premiums, to those of our present readers whose subscriptions are paid in advance, for the work of going out and getting new subscriptions. Your neighbor bee-keepers perhaps have never heard of the American Bee Journal, although it is now in its 47th year. Why not try to get them to subscribe? You may be surprised how readily they will do so upon your invitation.



Hon. R. L. Taylor, of Lapeer, is now the Michigan inspector of apiaries, succeeding Mr. Hutchinson, who felt that he could no longer continue the work owing to other duties that press upon him. Mr. Taylor has had large experience with foul brood among bees, and is otherwise in every way specially fitted for the work of bee-disease inspector. Michigan bee-keepers are to be congratulated on the efficiency of their inspectors.

crossing of different varieties looking to the production of a superior honey-producing strain. The diseases of bees are also receiving thorough investigation.

Dr. Phillips has already proven himself the right man for the place which he occupies. The American Bee Journal will be glad to co-operate with him in his efforts in behalf of the progress of bee-dom.

"Songs of Beedom."—This is a beautiful 16-page-and-cover pamphlet, 6x9 inches in size, containing 10 bee-songs—words and music—all the songs so far written specially for bee-keepers, we believe. It is nice, as well as convenient, to have these songs all in one binding. Every bee-keepers' organization should have copies for use at conventions. They could be sold to members after using once, or held by the secretary for use at future meetings. Of course, every bee-keeper's family will want at least one copy. It is sent, postpaid, for only 25 cents, or 3 copies for 60 cents; or, we will mail one copy with the American Bee Journal one year—both for \$1.10. Send all orders to the office of the American Bee Journal.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, \$1.00; or with the American Bee Journal one year—both for \$1.75. Address all orders to this office.

Mr. E. K. Meredith, of Batavia, Ill., died with hemorrhage of the brain March 12, 1907. He had been sick for 2 weeks with inflammatory rheumatism, but apparently was improving. Mr. Meredith was an active member of the Chicago-Northwestern Bee-Keepers' Association, and attended the last meeting with his wife and daughter. His many friends will join with the American Bee Journal in extending sincerest sympathy to his family in their bereavement. As Mrs. Meredith also understands bee-keeping, doubtless she will continue in the business.



No. 3—Feeding and Feeders —Bottom-Feeders

BY C. P. DADANT

The next style of feeders that we will consider is the bottom-feeder. Feeding under the bottom, on the bottom, or in the bottom, is practised considerably. Feeding on the bottom, without a feeder, has been practised in two ways, by raising the hive in front so that the feed can not escape through the entrance. It may be done with granulated honey poured between the frames at the back, or if the hive is absolutely tight at the bottom, by pouring liquid food so that it will lie at the back end of the hive. In such cases, the hive must be entirely water-tight and nailed to the bottom-board. It is a very expeditious way. The main objection is that the hive being raised so as to slant backward, the rain may beat in and mix with the feed. This was practised more with the old-style portico hive than with any other, owing

to the shelter furnished to the alighting-board by the portico ceiling. Urgent requirements may be filled in this way with almost no preparation. As to the feeding of granulated honey in this manner, it is objectionable when the intention is to stimulate breeding without necessitating the bees' visit to water supplies, for granulated honey seems to make an increased supply of water desirable.

Bottom-feeders are made to be attached under the bottom, with a connection through a hole with the brood apartment, or may be a part of the bottom-board with an extension on the side at the back so as to be refilled without opening the hive, as in the Alexander feeder.

The only fault of these feeders is in placing the food below the brood-nest, and sometimes remote from it, as weak colonies sometimes neglect to visit the feeder if the weather is unfavorable. I have often found food untouched in a bottom-feeder, when the colony evidently required help. Yet, in many ways those bottom-feeders are com

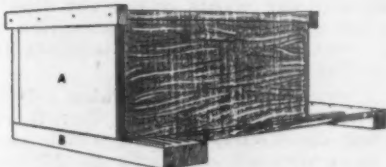
Dr. E. F. Phillips is now "in charge" of "Apicultural Investigations" in the Entomology Bureau of the Department of Agriculture at Washington, D. C. We learn this from a Government pamphlet on the "Organization of Department of Agriculture, 1907," which details the work of the Department and gives the names of those in charge, etc. The particular paragraph referring to the work in the interest of bee-culture reads thus:

The importance of the apiarian interests of America are recognized by the establishment of an office for special investigation in this field. Inquiry is under way to determine what crops may be profitably employed to fill the gaps in the honey yield, or to create artificial pasturage for apiaries, and efforts are being made also to introduce new honey-producing plants from abroad. The different races of bees are being tested to determine their relative availability for this country, and experiments are being conducted in the

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mendable, especially as they do not cause the escape of heat from the hive, since it is not necessary to open the top in order to give the bees an additional supply.

Of course, the best feeders are made in narrow sections and very shallow, so that the bees may not drown in the feed. These feeders, as well as others which will be mentioned farther on, must be made so that they will not ab-



ALEXANDER FEEDER.

sorb or soak the food. They are commonly made of pine, which is coated with paraffin. In some parts of Europe propolis is gathered, melted and used for this express purpose. A bee-keeper who desires to make his own feeders, and wishes to coat them with some preparation, may be able to make them honey-proof by using a preparation of beeswax and tallow—about half and half—which is poured in the feeder while hot, and poured out again, leaving a slight coat on the wood.

Pure beeswax might be used, but aside from the fact that pure beeswax is more expensive, it is noticeable that it does not soak into the pores of the wood as readily as a preparation containing tallow or even lard. This preparation, melting at a lower temperature than pure beeswax, is also less apt to crack or peel off when the weather is cold. It may be used for a number of requirements. Mixed with a small quantity of wood ashes and rosin it will make a liquid cement which is used to stop large cracks in wood, whether feeders or other implements; even such things as water-barrels that are damaged may be made whole by using it. But in any case, remember that the wood must be dry before any such preparation is applied, for the least amount of moisture would prevent the soaking of the wax in the pores of the wood. Water is used to prevent wax from sticking to objects that are dipped in it while hot.

You must also be careful to keep the cake of tallow-wax thus prepared separate from your beeswax, for there would be a row if you should happen to send it by mistake to a comb foundation manufacturer. We keep a small iron kettle with some of this tallow-wax already mixed in it all the time, so that all we need to do is to warm it up for use. When it is melting keep a close eye on it, for it will run over and give you trouble if allowed to get too hot.

But I notice that I have gotten clear away from the description of bottom-feeders. There is still another kind which has been highly commended, but of which I do not approve. It is the entrance-feeder, made in the shape either of a jar enclosed within a box—the Boardman feeder—or of a trough, opening into the entrance and closing this entrance. The entrance-feeder is

suitable only if used on a strong colony, otherwise there is a great risk of strange bees helping themselves to the food, or, to say the least, of being attracted there and induced to rob the weak colony which it is intended to help. The feeder, which is placed at the rear of the bottom, has at least the advantage over this, that the robber-bee, if attracted by the smell, is induced to hunt about the rear of the hive, around the crevices near the feeder, and can rarely go in at the entrance and cross the length of the bottom-board without having to take up the gauntlet with a number of the inhabitants of the hive.

Front feeding, therefore, unless carried on with the greatest circumspection is not desirable. If the entrance be closed with the feeder in position, it is necessary to look after it and release the bees in warm weather before they become worried. Yet, one small advantage of the entrance-feeder which has perhaps served to make it popular with some apiarists, is that it is located at the spot most often traveled over by the active adult bees, and that it will therefore not be so readily neglected as a rear feeder.

Hamilton, Ill.

Successful Wintering of Bees

BY ALLEN LATHAM

It is possible that the sentence which Mr. Byer, on page 227, quotes from my writings may need no further defence, inasmuch as Mr. Byer himself offers in his last paragraph so strong a support for the statement. I write now more to impress upon the readers of the American Bee Journal the truth of what Mr. Byer has to say, and to urge upon them the desirability of wintering our bees as well as we should hope to winter our cows and other domestic stock.

It so happens that all farmers do not winter their cows without loss. There are still some who house their animals poorly, either with too slight a protection or else with too little ventilation and cleanliness, and on top of such treatment economize (?) by feeding them upon meadow-hay and water. That such men bury two or three scrawny beasts the next spring is no surprise to their thriftier neighbors.

Suppose, for instance, that a farmer persisted in keeping every animal that came his way, whether healthy or weak, young or old. Suppose he did not practise what most do, namely, to get rid of undesirable stock, make into beef those that are not strong, or else, if conscientious, sell them to those who will turn them into beef. If we suppose these things then we know that it would be inevitable that every winter would see a loss of from 10 to 25 percent of all such domestic animals. The fact is that domestic animals are wintered successfully only because most of us strive to keep our stock uniformly vigorous. But such is not the case with our bees, for, unless I am much mistaken, the majority of beekeepers think more of the number of colonies they possess rather than of the quality. It is not, therefore,

strange that their spring count falls so much below their fall count?

Leaving out the first year of my bee-keeping, a year in which winter cost me 100 percent of my bees, as my only solitary colony was lost, I think that I can say that my spring count has not averaged more than 5 percent less than my fall count. Of this falling off, moreover, almost none should be laid to winter directly, as much of it came about from loss of queens. In fact, I can remember only one colony the loss of which should be laid wholly to winter, and I allow that one only because I never could find any other cause for the loss.

One winter I lost more than 60 percent of my apiary, and might lay the loss to winter; but it so happened that the fall before the hives were very light in stores, and I followed some directions about feeding by laying a cake of candy above the frames. Such a sight as there was the following spring, I never wish to see the like again! These cakes of candy were made of honey and syrup and were not grained. *Never feed with cakes of candy over the frames unless those cakes are fine grained like the inside of a chocolate cream.* Never put honey in with the sugar of which these cakes are to be made, for the honey will prevent the graining. Cook the syrup to a temperature of about 233 Fahr., and set aside where it will cool. When nearly cool, stir it slowly till it grains. Just before it gets too stiff turn it into dishes to harden. A temperature of over 233 will make the cakes too hard, while under 231 the cakes will be rather soft. The cakes which I made in that disastrous winter ran down over the combs and daubed the poor bees, resulting in the stickiest, daubiest mess that ever I saw.

So with all the colonies which I ever lost in winter, I find that in every case (save one) I did something wrong. By correcting these errors I now no longer have any fears of winter, as far as my bees are concerned. That one exception was a colony which was abundantly strong in fall and had lots of honey. In the spring the bees were dead with honey not an inch away. The hive was rather moist, but aside from that I could find nothing wrong. Twenty-nine other colonies in the yard wintered all right.

The past winter here was rather severe, called very severe by old natives. I am inclined to think that my bees would have come through in poor condition had it not been for a flight-day in early January. I count my bees safe if January furnishes a flight, and I can remember but one January during the last 23 years which has not furnished a flight for the bees. The winter of 1903-4 furnished no flight from the middle of November till late in March. There was, according to reports, a loss of 75 percent of bees in the New England States. I lost 2 colonies out of 38, and each of these died from an entirely different cause, the entrance of one getting accidentally hopelessly closed, the other starving by a peculiar mischance. That winter the bees had good stores. This past winter the bees had miserable stores, having failed of filling up with the

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usual white honey. Hence, I conclude that a mid-winter flight this year saved colonies from coming out weak, if not from actual death.

Thus do the years run. There is almost never a winter in which all the bad conditions combine, for if the stores are bad the bees are more than likely to have a good mid-winter flight. If the winter is severe, then the bees are more than likely to have good stores, and so be able to endure the confinement.

Let any one who fails to winter his bees successfully put more brains into his methods of wintering. Let him see to it that all colonies are reasonably strong in bees. Let him see that all colonies have plenty of stores—the better the stores the more likely the bees to survive. Let him house his bees well, protecting them from the winter blasts. If he puts them into the cellar, let the cellar be properly fitted for their welfare. If he leaves them outside, then let each hive be adapted to keep the bees in it dry and warm. If any fail to winter well, let him study the matter, pondering over everything that could possibly have to do with the poor result. If observant, he will more likely than not find the cause of his failure, and can in future avoid it.

I can shake hands with Mr. Byer in all that he says in the last paragraph. Though I recognize the possibility of bad results in wintering even with the best of care, I do not recognize any probability of such results. I consider that in the vast majority of cases bad wintering should be considered a disgrace to the apiarist rather than a misfortune. It is a misfortune, and a sad misfortune, to have our bees die because of a combination of circumstances which lies beyond our control. It is a mighty good bit of fortune that such a combination is so rare that it scarcely falls more than once in a lifetime.

Norwich, Conn.

Getting Ready for the Honey Harvest

BY G. M. DOOLITTLE

In nearly all localities where bees can be kept there are certain plants and trees which give a yield of surplus honey at a certain time of the year, while, aside from this, there is little more honey obtained by the bees than is needed to supply their daily wants and that consumed in brood-rearing. Some localities give a surplus at three stated periods—from white clover, basswood and buckwheat; others at two, white clover and basswood, or white clover and buckwheat, or, perhaps, basswood and buckwheat; while quite a large number give only one, as from white clover, or basswood, or buckwheat, or other fall flowers. Hence it must be apparent to all that if such a honey yield, or yields, should pass by without surplus, none can be obtained during the season.

From this it will be seen that in order to be a successful apiarist, a person must have a knowledge of his locality, and also know how to secure the laborers (bees) in the right time, so that the

largest or maximum number can be on hand just at the time that the flowers giving the greatest yield of surplus nectar are in blossom. Failing to do this, no one can expect to attain to the highest and best results in the production of honey, and the object of this article is to set those to thinking who have not thought on this subject, so that they can obtain the best possible results from their bees.

First, then, we have the location. Here, in central New York, our honey crop comes mainly from linden or basswood, which blooms from July 1st to 12th, and lasts from 10 to 25 days, according to the weather. In other localities in this State, white clover is the main crop, coming in bloom June 15th to 20th; and again in others buckwheat, yielding honey in August; and in a few localities there comes a surplus from all three of these sources. But as nearly all have a yield from basswood, I will speak of that as the source from which we obtain our honey harvest. Bear in mind, however, that it devolves on the reader of this to ascertain, by careful watching, just when and what is the source of his surplus honey crop, so as to work accordingly.

When you see by opening one of your hives that the bees are storing honey so that they are lengthening out the cells with new white comb along the top-bars of the frames, with plenty of nectar glistening in any empty cells there may chance to be in and about the brood, then is your time to go out in the fields and in the woods till you find what the bees are at work upon; then watch as the years go by to see if a yield comes from this source nearly every year, and, if so, work for the bees in large numbers at that time of the year. Do not depend upon the "say so" of some old citizen, for he may not know any better what he is talking about than did the old bee-keeper whom I asked nearly 40 years ago, when I first began bee-keeping, where the bees got their first pollen; and he told me that all the pollen which the bees gathered before fruit-trees bloomed came from the willows. I believed this till I came to look for myself, when I found that the very first pollen came from skunk cabbage, the next from elms and soft maples, with a still more bountiful yield from the hard maples a little later on, with very little from the willows at all, and that only from the pussy willow, all the other willows yielding honey but no pollen.

After having determined when we may expect our harvest of honey, the next step is to work for the bees so they may be in just the right time for the harvest. If you have a field of grain to cut, you hire the laborers when the grain is ripe, not before or afterward; yet in keeping bees very many pay no attention to the matter of securing the laborers, so that, as a rule, they are more often produced so as to become consumers rather than producers, and thus we quite often hear persons claiming that bee-keeping does not pay.

The queen is the mother of all the bees there are in a colony, she laying from 3000 to 4000 eggs a day when coaxed to do this, either by a moderate

honey-flow being on from the fields, or the bee-keeper so fixing his colonies that the bees feed the queen abundantly just when he wishes the queen to be depositing these 3000 or 4000 eggs in the cells each day in preparation for the maximum amount of bees just in time for the harvest. And yet the queen often lays only from 500 to 1000 eggs daily at the very time she should be doing her very best, just because this moderate flow of honey is not in line with our wants, or else the would-be bee-keeper is paying no attention to this matter of securing laborers in time for the harvest.

After the egg is laid it takes 3 days for it to hatch into a larva. This larva is fed about 6 days, during which time it has grown so as nearly to fill the cell, when it is capped over and remains hid from view for about 12 more days, when it emerges a perfect bee; thus making a period of about 21 days from the laying of the egg to the perfect bee. When the colony is in a normal condition, this bee now works in the hive for 16 days more, doing such work as feeding the larvæ, evaporating nectar to the consistency of honey, building comb, etc., when it is ready to go outside as a field-laborer, and at 45 days from the time it emerges from the cell it dies of old age and another generation takes its place.

From the above it will be seen that the egg must be laid at least 37 days before the time which we have ascertained by watching that our honey harvest is to begin, in order that our bee has the opportunity of laboring in that harvest to the best advantage. Now, if the harvest is basswood, commencing to bloom say July 8, the eggs for the laborers should be laid on or before June 1; and if from white clover then they should be laid on or before May 10, provided we have ascertained that white clover blooms so the bees can work on it to advantage about June 16.

But how shall we coax the queen to lay the eggs just when we want them? There are several ways of doing this, such as spreading the brood, feeding the bees warm syrup every night, etc., but I will speak of the one I find just as good as any, and one which requires the least labor of anything I know of.

About a week before we wish the queen to be at her height of laying, take combs which are filled nearly or quite full of sealed honey to the amount of 20 pounds or more (that is, see that each colony has at least 20 pounds of stores in the hive), and break the sealing of the cells of 2 of these combs, after which one of these is to be set in the hive right up next to the outside combs of brood on either side of the brood-nest, doing this work just at night so that no robbing need be started by attracting other bees than those in the hive where you set the honey. Put the other frames of honey outside of these 2 frames, when the hive is to be closed up as warmly as possible by stopping all cracks, etc. There is nothing that incites brood-rearing like this, as it incites the bees to the greatest activity in removing this running honey from the cells, thus causing them to feed the queen freely

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on prepared food, so that in 2 or 3 days she is laying her maximum amount of eggs; and, after this, brood-rearing is kept right up from the bees feeling so rich in stores that they see no need of retrenching; they thus keeping on uncapping and removing the honey from the combs, while the queen keeps right up depositing eggs in the cells as fast as the honey is removed, which results

in doubling the amount of brood there otherwise would have been had the bees been allowed to take their own course.

In this way the best possible result as to honey is secured, provided we have our supers and everything else ready and on hand when the anticipated harvest arrives.

Borodino, N. Y.

that side finished, too. Look out for too hot a sun for the comb's sake.

I wonder if the moth-eggs can stand the heat, too? I expect to experiment in this direction some time.

The Pepper-Tree—Getting 'em Mixed

The pepper-tree (*Schinus molle*), while a native of Peru and Chile, has been largely planted in California, where it is thoroughly at home. It is one of the most ornamental trees that can be grown. In many respects it resembles a weeping willow, though it is not so funeral-like. It is a good honey-tree. Prof. Cook, in his excellent "Bee-Keeper's Guide," classes it with the honey-secreting trees that bloom in April. 'Tis a fine tree, 'tis true, but he is too previous; it blooms in the fall, usually in September.

But the Professor is not so badly mixed as was the writer of the article on "Eucalyptus," in the "ABC of Bee Culture," page 131, edition of 1905. Two entirely different trees are described under one head; the article begins with the word "Eucalyptus," and ends with "pepper-tree." Talk about Irish bulls!

Mice Fond of Moth-Larvae

In looking over some combs lately that were stored away in the honey-house, I found that mice had gotten to them. The only ones that the little varmints seemed to injure were some that had moth-larvae in them. Out in the apiary I discovered a hive that became beeless during the winter, and moth-larvae had commenced to work through the combs. As the hive had a rather large entrance, a mouse made its way into the hive and just cleaned out all the embryo moths. None of the comb, save that where the larvae were tunneling, was injured by the "foxy" little animal. Here seems to be a new use for the despised mouse. Maybe some one can breed a strain of mice that can be recommended to beekeepers as moth-exterminators. I will pass the "problem" over to our Hasty Afterthinker.

Honey as a Health-Food.—This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 70 cents; 100 for \$1.25; 250 for \$2.25; 500 for \$4.00; or 1000 for \$7.50. Your business card printed free at the bottom of front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

You let me know that my time has expired for the American Bee Journal. Now for the life of you, never stop it till I tell you, for I can not bear to lose it. Enclosed you will find money order for same.—IGNATZ KOCH, of Wisconsin.



By W. A. PRYAL, Alden Station, Oakland, Calif.

A Wet Season

The season has been a real wet one; long and continuous rains fell since my last reference to the season. In this vicinity the rainfall has been close upon 30 inches—it will, no doubt, exceed that amount before the end of May. Further north, and in the mountains, the precipitation has been twice as much as here—in a few cases, perhaps, as is often the case, especially in Humboldt Co., the rain-gauge records three times the amount of rain that fell hereabouts.

In the southland the "heavenly dispensation," as a certain news-writer wrote it once upon a time, has been ample, fully as good as any that ever favored that sunny land. But will the honey crop be large? That's the question. The long-continued rain has been the means of retarding breeding, so that it may be that there will not be as full a work-force to garner the nectar as there should be when the main honey-flow comes.

The growing of the plants went on apace, regardless of the rain, so that the flowers will be out almost as early as ever. It is probable, however, that the period of inflorescence will be longer drawn out than it is during a dry, or comparatively dry, year.

As matters now stand, I do not remember seeing a season when there was such a promise of a big flower-crop. Now for the bees to capture the nectar!

Bees on the Islands

On the large islands formed by both the Sacramento and the San Joaquin rivers near their mouths, many large apiaries have been kept for years, and they also yielded a sure crop, even when there was a honey-famine in other portions of the State. The reason that bee-keeping on these islands never became popular, is almost entirely due to the fact that the nectar gathered by the bees yielded a rather dark honey—too dark, generally, to command a satisfactory price. The

honey was usually purchased by the large manufacturing bakeries.

The excessive rains of this spring, and the flooding of nearly all of these islands, has ruined most of the apiaries, many of the hives being carried away by the surging waters. These islands are the great garden-spots of northern California—no richer land is to be found in the world. Some of the islands were almost entirely given over to the growing of asparagus—a vegetable that attains its highest perfection in the sandy and peaty soil of these reclaimed islands. The canning of this vegetable was mostly conducted by an Oakland firm, and its output was said to be the largest in the world. I understand the flooding of their fields has practically bankrupted the firm. This is too bad, for many reasons, one being that asparagus bloom is not a bad forage for bees.

In this flooded district there were immense fields of alfalfa which yielded the best honey obtained on the islands. These fields are ruined. It will be a couple of years, I understand, before the land is restored to its original fruitfulness. Thus, where the rains have helped many, others have been practically ruined.

The Sun vs. Moth-Larvae

One hot day toward the end of March I was overhauling a hive in which the bees, for some unknown cause, had "given up the ghost," and I found the combs badly infested with moth-larvae. I shook some of the "worms" out on the black cover of an adjoining hive. The larvae soon began to squirm, and in a few minutes died. That gave me an idea; it may not be new, for 'tis hard to find anything new nowadays under the sun. (No joke intended.) Why not let "Old Sol" get in his work on the moth-pest?

I thereupon set several "wormy" combs in the hot sun. The result was magical. Larvae came hustling out of the comb and soon died under the hot rays. The comb was reversed, and

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Conducted by EMMA M. WILSON, Marengo, Ill.

A Sister Starting With Bees

DEAR MISS WILSON:—I want to keep a colony or so of bees, but as our place is new—not a tree nor a shrub—how am I to manage when the bees want to swarm?

When is the best time to get a colony? Can you give me the address of a reliable person handling bees?

Any point that would be of particular importance to a novice would be appreciated.

(MISS) GENEVA WELBORN.

Jackson Co., Mo.

You are to be congratulated that you have no large trees to bother you at swarming-time. If, however, you wish a place for swarms to cluster, you might stick a pole in the ground with a bunch of dark rags attached to the point; or, better still, a piece of old honey-comb, as a substitute for the trees and shrubs. But the simplest way would be to clip your queens' wings, and then no alighting-place would be needed.

In the spring or early summer, after bees are flying daily, would be a good time to get your bees.

Look in the advertising columns of the American Bee Journal. You will no doubt find what you want there.

The first thing to do is to get a bee-book and study it, and no bee-keeper can afford to do without the bee-papers. If any special point comes up that is not made clear in the book, it will be a pleasure to answer any questions in this department.

A Man's Idea of a Woman's Bee-Dress

In the Irish Bee Journal D. M. M. quotes from a book by John Keys, 1796:

"Women should not meddle with bees without a headdress, nor then without a man's coat, and I had almost said breeches also."

Poor women; pretty warm work to have to wear a man's coat with the thermometer in the 80's or 90's.

Preserving Oilcloths With Beeswax and Turpentine

Oilcloth looks better and lasts longer if polished with beeswax and turpentine than if washed. To make polish, dissolve an ounce of beeswax in a pint of turpentine. Apply with one piece of flannel and polish with another. To get a good effect quickly be careful

always to use clean cloths. Old woollen vests, etc., will answer the purpose, and it is really a saving of time in the end if they are washed each time they are used.—A. R., in Vick's Magazine.

The Sting-Trowel Theory Again

DEAR MISS WILSON:—The following appears in one of our local periodicals:

REAL USE OF THE BEE'S STING.

"The bee's sting is a trowel, not a rapier," said a nature student. "It is an exquisitely delicate little trowel with which the bee finishes off the honey-cell, injects a little preservative inside and seals it up. With its trowel-like sting the bee puts the final touches on the dainty and wonderful work. With the sting it pats and shapes the honey-cell, as a mason pats and shapes a row of brick. Before sealing up the cell it drops a wee bit of poison into the honey. This is formic acid. Without it honey would spoil. Most of us think the bee's sting, with its poison, is a weapon only. It is a weapon secondarily, but primarily it is a magic trowel, a trowel from whose end, as the honey-cells are built up, a wonderful preserving fluid drips."

I would like to inquire if "Nature Student's" bees are a new species, or are they just common *Apis*, like yours and mine? It is an entirely new idea to me, that a full-fledged—i. e., barbed—bee-sting is a secondary matter. I have been under the impression

all these years that when the little busy bee "patted" me with her delicate little trowel it was primary, very.

As for formic acid, the "A B C of Bee-Culture" calls the poison secreted by bees, "*Apis mellifica*," and the same author says further, "that the bee-sting poison frequently relieves certain forms of rheumatism, paralysis, and perhaps dropsy;" but he neglects to mention that the bees use the poison as a preservative for their honey.

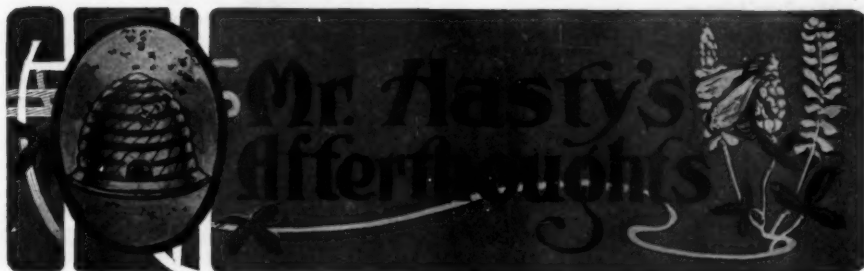
This has been the hardest winter on bees in my experience. I winter them outdoors with chaff cushions, and protected by sheds and evergreen hedges; but I found 5 out of my 21 colonies dead this spring. The remaining 16 are to-day (March 27) bringing in their first pollen from willows, and are just booming with bees and surplus energy.

MRS. BURL BILLYARD.

Millgrove, N. Y.

Some years ago Rev. W. F. Clarke, a Canadian bee-keeper now dead, published a little book of verse in which he put forth the theory that the sting of the bee was used as a trowel, and that before sealing a cell of honey the bees put into it a droplet of poison from the sting. No proof whatever was given; it was a flight of imagination pure and simple, with no shadow of foundation. With an observation-hive one can see the work of the bee, yet no one has ever seen a bee working wax with its sting, or letting fall from it into a cell of honey the tiniest bit of poison. So you are quite safe to stick to your "primary" view.

Formerly formic acid was believed to be the poison in a bee's sting, but later investigations show it to be something separate. "*Apis mellifica*" is the scientific name for our bees, not for the poison, although a medicine prepared from bees' stings may be called by that name. Formic acid is found in honey, but it gets into the honey while the honey is in the bee, not after the honey is deposited in the cell.



The "Old Reliable" as seen through New and Unreliable Glasses,
By E. E. HASTY, Sta. B. Rural, Toledo, Ohio.

ROUND-CELL BUILDING—NON-SWARMING AND SWARMING LOCATIONS.

No, Mr. Aikin, I guess I won't climb clear down from that round-cell tree yet. Some other time—maybe—maybe not. Strikes me you have a pretty compression theory—that hardly tallies in every point with the facts. Still I'm not ready with any reply. At present I enjoy more seeing you up a tree than I suspect almost any man

could be compelled to climb down from—unless he belongs to the sect of never-climb-downs. Your tree is where you say, "The bee is governed in no sense by reason." How would it do to say the dog is governed in no sense by reason? When the dog turns around several times before lying down, it is not probable that he is governed by reason. But when he sees his master take his gun, and he forthwith begins to dance and caper like a wild creature,

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he reasons that there is some hunting going to be done—and he likes the job. The dog knows why he does things for the most part; and the things he does not knowing why are comparatively few. But when we pass from the dog to the bee we find the reverse the case. Very many things which superficial view would call wisdom, are simply automatic or habitual; and the bee does not really think or question as to what object is in view. But for all that there is still a remainder of things which bees do just as intelligently as other non-human creatures do. Of course, we know that there are still some folks eager to jaw, jaw, jaw to the end of time in defense of the proposition that no creature but man has a particle of reason. By some odd hocus-pocus they have made this a tenet of their religion. Venture to hope that not many of this tribe of theologians are bee-keepers.

That was a narrow escape you had from getting up the no-trouble-to-control-swarmling tree. Your experience in the natural change of a non-swarmling location into a swarmy one is valuable to us. Page 188.

RESPIRATION OF THE BEE.

I wonder a little what Mr. House was at when he said, "Normal respiration of the bee is 3 or 4 times a minute; under abnormal conditions as high as 124." As a bee has no rib bones and no diaphragm, it might be asked how the respiration trick is performed. Say perhaps a general contraction of muscles, causing part of the air in the spiracles to go out, followed by general relaxation causing fresh air to come in. The highest rate mentioned would be about 2 per second—same rate at which some clocks tick. My memory dimly confesses to having seen something like successive undulations, not far from that rate of speed, slightly stir the anatomy of highly active bees. At least I'm not going on record as denying that the bee has what amounts to a timed respiration. But I guess most of the brethren either don't know this or else so ignored it that it amounts to about the same. Page 189.

CARNIOLAN BEES SLIGHTLY LARGEST.

Pretty positive evidence that Carniolans are slightly the largest, if perforations .162 of an inch give satisfaction in most other yards, but are returned as too small from yards where Carniolans are kept. Strikes me I would rather have an occasional queen get up (as they have been doing) rather than have the last one kept down at the cost of having all the workers at their work go through "with a squeeze and a grin." So I still incline to the old .168 of an inch zinc. Put the zinc smooth side down, and so get decided advantage at no cost. Page 190.

TEXAS ELM HONEY FROM THE LEAVES.

Mr. Smith, of Texas, thinks elm honey comes from the leaves, being in fact "honey-dew." Here's "locality" again with a vim. Do Texas elms have leaves at blooming time, or is that a

slip of the writer's memory? Up here elm leaves do not appear till later on. However, the inflorescence of the elm furnishes lots of surface on which an aphid might breed. Page 191.

RENDERING BEESWAX.

In wholesale way, with Mr. Cogshall's kettle and sack rendering of beeswax, the slumgum contained 35 pounds of wax to the barrel. That's more than we enjoy throwing away. Page 190.

HONEY-DEALING ANNOYANCES.

The way Mrs. Amos trims a certain bee-man is somewhat amusing. But "we're all poor critters!" She feels real annoyances on one side. He feels the pinch of severe conditions on the other side—the difficulty of making the days have a hundred hours each. Still I suppose we shouldn't mortgage a hundred of to-morrow's hours unless

we are prepared to deliver that many. Page 192.

ELECTRIC HEAT FOR BEE-CELLAR.

An electric heater for the bee-cellar! Well, well, we are coming on. And I see no reason why electric heating should not be the best possible—in this case where heat is often needed, but hard to apply without doing mischief. Page 191.

USE BEST HONEY FOR INFANTS' FOOD.

If honey is to be used in an infant's food, let it be done with care, and by a judicious person, until it proves itself all right. And in heavenly mercy don't let it be such poor, half-spoiled honey as is sometimes sold. Sadly too many outsiders think honey is honey, and don't discriminate. Still, I guess there's not danger of any such deadly harm to the little fellows as bad milk sometimes brings. Page 193.



Report of the 37th Annual Convention of the National Bee-Keepers' Association, held in San Antonio, Tex., Nov. 8-10, '06

(Continued from page 316)

DISTANCE TO BREED PURE QUEEN-BEES.

"How far should a breeder of pure queen-bees be isolated from all other bees?"

Dr. Bohrer—I don't know of my own personal knowledge how close queen-breeding apiaries are situated to each other, but my own idea has been this: As different races of bees are being brought into the United States, these apiaries should be 12 or 15 miles apart. I know this, that bees will go 7 miles. I have timed queens that have left a hive and have been out $\frac{3}{4}$ of an hour. Now how far they have been I have no knowledge. How far the drones will go I don't know, but I have reason to know that queens and drones will go a greater distance than 12 miles. I have known of two races being bred in the same yard and sent out over the country. Now, whoever these bee-keepers are, they have not been sending out pure queens, and they ought to quit the business. Now, I have no ax to grind; I have no queens for sale and don't intend to have any. I am not in the bee-business to make much money out of it, but for pastime, and I don't want to quit it now. I am not going to give any names, but there are parties here who know something about it. If they are sending out different queens from the same hive, they ought to be notified to quit business, or be exposed.

I know of one man that I understand had foul brood in his apiaries, and considerable money was sent in for queens, and he had the honor to notify them that he had foul brood and would not send out a queen. I don't believe that he is the only man that would do this. But these are matters that we want to hunt up. If you have foul brood in your apiary, you need not be scared about this matter, nor ashamed of it, but it is harmful to keep it. It may be your fault, it is a misfortune, but go to work and get rid of it. The man who is sending out different races of bees, and breeding them side by side, is not working for the interest of the bee-keeping of this country. I don't know the names of these parties, and especially those who are sending out four different varieties of bees bred in a small apiary of 24 or 25 colonies, all kept in one yard. We should work together and find out who those parties are, and quit patronizing them until they do better. I don't want queens badly enough to get them from a man who will do business in this way.

Pres. Dadant—Are there members who have any experience in this matter, in regard to distance?

W. H. Laws—I have been wondering who in the world such charges could be brought against. Dr. Bohrer is very earnest in what he says. Since the introduction of the baby nuclei, I have known an honest man who breeds the Carniolan, Caucasian and Italian, and keeps them all in one yard. But he takes 200 or 300 of these baby nuclei and goes out far in the country with them, and these queens are mated to

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those drones. A few days afterwards he brings those drones in, and those bees come from the same yard. He is doing a good business, and a man that buys queens from him is getting fine stock. He has a few bees all kept in the same yard, but the mating ground is in a separate place.

Will Atchley—I have had the same complaints come from a party, that I think he refers to, and I visited the same place and I found what Mr. Laws says is true.

A Member—I want to say that Dr. Bohrer is talking from what he knows, but that party was not from Texas. It has been asked that the National Association should look after the queen-breeders, and know that bee-keepers are getting stock true to name; that the Association appoint a committee to investigate this matter. There are some who are doing everything that is possible to breed true to name; we send to them and their bees are true to name when we get them; they are not satisfactory, and I think many times it has been in getting tested queens that have been hurt in transportation. Would it look reasonable that if you should buy a fresh-milk cow and ship her from home down to Texas, without any care, would you expect her to continue a nice fresh cow when she arrived? Would you expect this of a nice tested queen? Yet it is not the fault of the queen-breeder? I believe that some of us are inclined to criticize queen-breeders that are doing right, and need upholding in what they are doing. We should know that a man is shipping from an infected yard; those things ought to be investigated.

Dr. Bohrer—I want to explain in regard to the mater of queens being injured through the mail. I have not found much abuse in that particular. I purchased a queen from a Texas queen-breeder, and she was one of the best that I ever saw.

MOST PROFITABLE RACE OF BEES.

"What is the most profitable race of bees for both comb and extracted honey?"

Mr. Stone—I think the Italian bee is the most profitable.

Mr. France—My observation from the State of Wisconsin says the Italian bee.

Mr. Victor—Yes, I think the Italian bee is the most profitable.

W. H. Laws—I would like to ask Mr. France if it is the improved or the 3-banded Italian he prefers.

Mr. France—I favor the 3-banded Italians for their honey-gathering qualities.

Pres. Dadant—In Europe there are some countries where they criticize the Italian bees. I had the opportunity of investigating bee-culture and the Italian bee. The man who writes a book is very careful of his statements. Now, I took 12 of the leading works of Europe and America, two German, one Swiss, one Italian, one English, one Irish and two French, and I think one or two American. Everyone said that the Italians were more industrious. I

believe that this is as good as can be given.

Mr. Stone—I would like to introduce the golden Italian, especially where I have any black blood in my colonies. You get good hybrids when you get the 3-banded bees.

Mr. Anderson—I stand up for the Carniolans, although I have not reared many. I have been using Italians principally until this year. I get more honey from the Carniolans.

Wm. Atchley—For 10 years I preferred the 3-banded improved Italians, but for the last 5 years the Carniolans have proven themselves superior to the Italians in my country.

THIRD DAY—FIRST SESSION.

After the members had assembled, they were requested to go to the City Hall, where a group photograph was taken. Then at 10 o'clock, a. m., the meeting was called to order by Pres. Dadant. The Committee on Amendments appointed last year was called upon to make a report.

Pres. Dadant—Mr. Holekamp was a member of the committee to divide the membership into districts in the different States.

Mr. Holekamp—I studied about this matter and found that the work which I had in mind for the directors was so great that it will be very difficult to find men who will undertake the work. Therefore, I think it best not to make any recommendations. I withdraw the proposition.

Pres. Dadant—You have heard the report of the committee. Under the conditions I think it will be well to accept this and discharge the committee.

On motion the report was accepted, and the committee discharged.

The Committee on Exhibits then reported as follows:

REPORT ON EXHIBITS.

We, your Committee on Exhibits,

beg to report a very creditable exhibit of apiarian supplies and honey. However, we consider it short in many respects.

The largest exhibitor, Udo Toepperwein, of San Antonio, Tex., shows hives of various kinds, both in the flat and nailed up; honey and wax extractors, bee-smokers, and other appliances generally listed in the catalogs, besides bottled honey and beeswax. A nice feature of Mr. Toepperwein's exhibit was the distribution of delicious candy made of honey.

A. G. Anderson, Secretary of the Emery County Bee-Keepers' Association, of Ferron, Utah, has two jars of sweet clover and alfalfa honey, of light color and good flavor.

T. F. Bingham, of Farwell, Mich., has one of his latest improved bee-smokers.

L. Werner, of Edwardsville, Ill., shows a bottle of Spanish-needle honey. This honey is rather dark in color, and strong flavored, otherwise resembling buckwheat honey.

N. E. France, of Platteville, Wis., General Manager of the National Bee-Keepers' Association, has gotten up a neat Guarantee Label or Seal, for members of the Association to be placed on packages of honey for protection. Mr. France also has samples of different kinds of honey from 34 States, labeled according to their source. One reason for the small exhibit here at the convention hall is on account of the exhibits at the Fair.

Exhibits of this kind in connection with bee-keepers' conventions should be encouraged. It draws out much interest, acts as a source of advancement in bee-culture, and adds materially to the interest of the conventions.

LOUIS H. SCHOLL,
DAVID H. COGGSHALL,
A. G. ANDERSON,

Committee on Exhibits.

On motion the report was approved.
(Continued next week.)



Send Questions either to the office of the American Bee Journal, or to
DR. C. C. MILLER, Marengo, Ill.
Dr. Miller does not answer Questions by mail.

Perforated Wood Separators

I have mailed you to-day a few samples of a perforated separator which I am making, and would like your opinion on the merits or demerits of the same. As you see, it is the plain sawed separator perforated in order to secure the advantages of the slat separator at less cost. I buy them at 40 cents per hundred, and can perforate 1800 per day, so you see it has the recommendation of cheapness, at least.

As I use the T-super I can not use slat sep-

arators with bee-way sections. Have such separators ever been used?

The greatest trouble in doing work of this kind is to keep from splitting the wood, and I have overcome that, having perforated 800 without splitting one.

Would it be worth while to patent the machine, or could the separator be patented?

Provided there is enough merit in a separator of this kind, I should like to make them and sell them at a more reasonable price than the supply-dealer would.

IOWA.

ANSWER.—You do not say whether you

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have used these separators, but I suspect not, for unless the perforations are narrower you will be pretty sure to have sections with ridgy surfaces. I do not believe you could secure a patent, for the same thing has been in use before. Wood separators are sold for much less than you mention, but I think they are sliced, and not sawed.

I do not quite understand why you say, "As I use the T-super I can not use slat separators with bee-way sections." I do not understand why any separator can not be used in a T-super, nor any section. Of course a fence separator will not work the very best with bee-way sections, but the two will work together just as well in a T-super as anywhere else. I have used in a T-super fences and separators of different kinds, also plain sections and bee-way sections of different sizes, and if you will explain a little more fully what you mean, perhaps I can show you the way out.

Two Queens in a Colony

At one of the bee-exhibitions held at Vienna, a discovery was made which perhaps will change the opinion held on queens living together. Before this it was thought an uncontested fact that every bee-family obeys one queen, and that it was never possible that the mastery could be divided. This opinion can not be maintained after Prof. Gatter von Simmering exhibited a bee-hive whose population was governed by 2 queens, and which seemed to enjoy the innovation. And what is more remarkable, the 2 sovereigns lived together quite peaceably, and without ever getting hostile. There was never a sign of grudge, jealousy, or any attempts to get rid of a disagreeable rival; but, on the contrary, the 2 queens seemed to feel a really reciprocal inclination. They came together from time to time caressing, and separated tranquil and peaceable, followed by their devoted subjects.

—Translated by HUGO BARTH, of Washington.

ANSWER.—While in general only one queen is to be found in a hive, it is not at all an uncommon thing, at the time when an old queen is superseded, to find at least for a short time mother and daughter living peaceably together. Indeed, this may be the rule rather than the exception; only hives do not happen to be opened a great deal at the usual time of superseding, which is at or near the close of the harvest. If the case in question was that of mother and daughter, it is only what may be found in the fall in almost any apiary. If the 2 queens were not mother and daughter, then the case is rare. In my own experience I never had but one such case.

Wiring Frames and Fastening Comb Foundation

1. I engaged in bee-keeping 2 years ago, and now have 25 colonies wintering in the cellar. I hope to double this number the coming summer, and have contracted for the 1½-story dovetailed hives for new swarms. I shall work for extracted honey from these hives exclusively, and have thought to use full sheets of comb foundation in both brood-chamber and supers. Not knowing the depth of the brood-frames in the ordinary dovetailed hives, I wish to know if I can procure comb foundation sufficiently wide to fill the frames above mentioned. Also, is it best to wire said frames? If so, how many wires would be necessary?

2. Describe briefly how the wires are put on the frames and fastened.

3. How close to the bottom-bar should the foundation come? and is it necessary to fasten the foundation to the end-bars of the frame? What instrument is best for the purpose?

IOWA.

ANSWERS.—1. Yes, comb foundation of that size is kept regularly in stock, and by ordering in advance you can have foundation cut any special size.

Yes, unless the foundation is heavier

than is profitable, it should be supported either by wires or foundation splints. For the deep frames 4 horizontal wires are used; and 2 for shallow frames.

2. You will probably find the end-bars of the frames pierced for wiring when you purchase them. Find out how long a wire will be necessary for each frame, and then figure on having your wire cut a little longer than necessary. Suppose you want to cut the wire 7 feet long. Cut a board half that length, 3½ feet, and wind the wire upon it. Then with wire or string tie around the wires every 6 or 8 inches, to keep it from snarling; and at the same time tie around the board so that the lot of wire will stay upon the board till all used up. Now cut the wires at one end of the board, and you can take hold of each wire at the other end and draw it out as wanted. Now run one end of a wire from the outside through the hole next to a top hole in one end-bar, then straight through the corresponding hole in the other end-bar, then back through the top hole of this last end-bar, then through the top hole of the other end-bar, and fasten the end by giving it a turn or two about a small nail driven partly in, and then drive the nail fully in. You will now see your way clearly to working downward with the other end, and fastening it in the same manner. Make a board that will just fit inside the frame, put cleats on the edges so the frame will be supported with the wires just resting on the board, lay the foundation on the board and the wires on top of it, pushing the foundation into the saw-kert of the top-bar as you lay down the frame; run the wire-imbedder over the wires with sufficient pressure to imbed them, then lift off the frame and crowd the wedge into the top-bar good and deep.

3. Leave ¼ inch between foundation and bottom-bar. With foundation splints the foundation comes clear down, but as you have not Miller frames, you can not well use them. There is perhaps no better tool for imbedding than the spur wire-imbedder.

T-Supers and Cleaning Sections

I have been very much interested in those discussions in the American Bee Journal about cleaning sections. I have been keeping bees in modern hives 7 years, and have now run my apiary up to nearly 100 colonies, and run mostly for comb honey. I have your "Forty Years Among the Bees," and read and studied it quite carefully in connection with a number of others, and all the bee-papers. I am using the Danzenbaker, Langstroth and Ideal super, and 10-frame hives. I adopted the plain section on account of the style and the close packing for market, and because they take less wood and are simpler and easier to make if I take a notion to make them, and a little cheaper when I buy them. But it is a hard proposition to decide whether I like the Danzenbaker better than the Ideal.

I have also been very much interested in your T-super, and I think I shall try it next summer, to see how I can make it work with my kind of section.

I noticed in one of your discussions, in replying to "Colorado," regarding the prodigious speed in which you get your sections scraped and cleaned, you seemed to place great stress on the T-super for a short cut. I fall to see the point. If I understand your "Forty Years," your sections are all out of the super before any attempt is made to clean them. Then how can the super have anything to do with the speed at cleaning? Of course, I note that you say you take your sections out in bulk, but my sections will also come out in bulk from the Langstroth and Ideal supers, and I imagine the slats would be about as easily lifted off as the T-tins; and I can not see why the fences won't come out as easily as your plain sawed separators, though I must confess it generally takes a good, stout knife all the way through to disengage the pieces, as they are so everlastingly glued together with propolis. I very seldom take them out in bulk, but one row at a time, and

it is generally done right out in the yard and among the bees. I just tip up a Langstroth super on one side, or an Ideal super on one end, as the case may be, right on the hive where it was filled, with bees and all in it, and with my right hand on the bottom of a slat, and my left hand on the top of an adjoining section and super-body, I work my fingers among the bees until I get good bearings, and begin pushing until one row of sections comes out. I then shake off the bees and set that row on top of a near-by hive, and with a knife I loosen another row and take it out, and so on until I get a load to carry in the house. I have found this the most practical way I have ever tried for the bulk of my crop. Sometimes, when bees are cross, or robber-bees are bad, I have to smoke the bees down and run inside fortifications with the super to do the work, but these are exceptional cases.

But to get back to the point: You say your honey comes out of the super in bulk. Well, I suppose all bee-keepers bulk their honey when it is taken out, anyway. What I want to know is, how the T-super makes any short cut at cleaning. My honey (what I have left of it) is now bulked on a long bench made by laying some 16-foot barn-boards on hive-bodies, and I can pick up 8, 10 or 15 at a time by simply gripping two outside sections in a row and pressing the others between like a printer does a form of type. I could set a number of them on a cleaning board in a jiffy, and throw a clamp around them and wedge them up as you say "Philo" does, but I can't see where the T-super part comes in to help me out in the matter.

My sections are protected on the bottom and sides, and the top is nearly always the hard part to clean. Now, I can not see how it will better the case to give the bees a chance to gob up the bottom. Nevertheless, I think what you say must have something in it, and I desire to test the matter the best I can, and I want all the light I can get beforehand. And now we go for the questions:

1. In what particular way does the T-super assist at cleaning sections?

2. Do you think your methods of manipulating T-supers would work as nicely with plain sections and fences as with bee-way sections and sawed separators?

3. Did you ever try the all-metal separators made of woven wire? If so, what was your experience with them?

4. Do you think it would be easier to push the super full of sections out of a T-super than it would a Langstroth super, or an Ideal super with slats?

5. Do you think it much easier to lift out the T-tins than it would be to lift off the slats?

6. Do you think it easier to lift out the sawed separators than the fences?

7. Do you not think plain sections would scrape much nicer in a clamp than the bee-way section, there being no chance for propolis to drop down between the sections?

8. How do you keep bits of propolis from flying against the faces of sections and sticking there, anyway while cleaning 2000 a day in that dexterous fashion?

9. How do you keep your scraper clean? I have always practised cleaning one section at a time with a knife; the latest is a butcher-knife, and I find a very few strokes clog it up so the edge is of no service, and so I devised a damp cloth to wipe it on. Sometimes it has to be wiped several times while cleaning a section, and the cloth fills up with propolis. I used to wipe it on my apron, which consisted of an old cotton wheat-sack ripped up and arm-holes cut in it, until I got a good portion of it well veneered with bee-glue, and I got tired of that. The knife clogs especially quick when a little honey has run out and stands on the wood with the propolis.

10. When cleaning sections, how do you manage the parts that are gummed with honey as well as with bee-glue?

11. Well, you can supply this question, as I think I have gone far enough; but I will add that I think I am getting a little above the average with the butcher-knife. I can beat "Colorado." I can clean 200 a day all

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right, and then some; but I will confess that I do not try to take off the stains. I have found that a great deal of the stains on my sections penetrate considerably into the wood, and so I content myself with making them smooth and unsticky.

MISSOURI.

ANSWERS.—I am glad of the prelude, for it gives me a better idea of just what you want answered.

1. I think you have an idea that I credit to the T-super more than I actually do give it credit for in the way of shortening the work of cleaning sections. I don't for a minute think it makes all the difference between cleaning 2000 and 500 or more. The most important particular is the opportunity of handling the sections in a block. If I think the next 9 answers do not bring that out clearly, I'll return to it in the 11th question.

2. Yes, and no. Depends upon what you mean by the question. One of the beauties of a T-super is that it adapts itself to a section of any kind. Indeed, you can use sections of 6 different widths in the same T-super at the same time. Can you do that with any other kind of super? I have used in the same T-super at the same time plain sections and bee-way sections, plain sawed separators and fences. If that's what you mean by the question, then my answer is yes; and I may say that the T-super used with plain sections and fences gives the same advantage over other supers, as when used with the bee-way sections and plain separators. But if you mean to ask whether I can work as rapidly with a T-super filled with plain as with bee-way sections, my answer is no. I can't say about others, but in this locality it's slower work taking out fences than plain separators, and slower work cleaning plain sections than bee-way sections.

3. I tried them when they first came out, many years ago, and at this distance I can not give particulars, but I did not find advantage enough in them to adopt them.

4. It is not easy to answer without the opportunity to try the two side by side; but it may be said in general that there ought to be very little difference in emptying two supers if the entire contents of each super comes out in a mass.

5. Yes. Even if a T-tin were no more easily removed, there are only 3 in a super.

6. Yes. A knife will slice right through at one stroke between the sections and the sawed separators. With fences you must hesitate at each post or you'll cut into the post. Whether you have plain separators or fences, it's easier to get them out of sections from a T-super than from any other super that allows the sections to be close together endwise. For in the T-super the sections are about $\frac{1}{2}$ inch apart endwise, and when at the proper temperature you can strike with the ball of each hand at the two ends of a row of 4 sections, and the single stroke will loosen all 4 sections from the fence. That trick is in constant use in this locality, and I think it's possible only with a T-super.

7. One ought to scrape about as well as the other, provided there be a perfect adjustment. But in clamping together a superful, it would be nothing strange to find a good many places where one section was 1-16 inch or more higher than its next neighbor where the two joined; this would make more trouble with the plain than with the bee-space sections. Bee-glue has the better chance to fall through the bee-spaces, but in this locality that is not a serious trouble.

8. It doesn't stick, because it isn't sticky. It's merely dry powder or larger pieces of entirely unsticky glue.

9. We don't have any trouble of that sort. The secret of it is that we don't work with sticky propolis, and I don't believe you need to either, if you wait till it's cool enough to be brittle.

10. If there be honey on a section it will be on the top. If there is any considerable quantity it is first lifted off by sliding under it a case-knife and scraping the honey from the knife into a dish. Where there isn't enough to scrape up thus, or after it has been

scraped up, a cloth quite wet mops off the honey, and a drier cloth wipes it off.

11. This is the hardest of all to answer, but I'll not attempt to answer all I can think of. I feel like first asking you a question: Don't you think you ought to be a bit ashamed to shirk off upon the other fellow the task of asking all your questions heretofore? Never mind about that, but let's go back to the first question. You may possibly not have caught the idea from what has been said that when a superful of sections is emptied out, all you have to do is to lift off 3 T-tins, and you have full chance at the whole top and bottom of the superful, and when you have the tops and bottoms of the sections cleaned you have the job pretty much done. If there is any other super with which that can be done, it does not now occur to me. You are quite right that you can assemble in the same way the sections from any super; but you must first take them apart and then put them together again. The T-super saves this.

When you say you take out 4 sections at a time and then get the bees off, I can't help wondering whether you would not get along a good deal faster to take off the whole super, and after piling up 10 or 12 supers allow the bees to get out of their own accord.

I don't know whether there may be anything in your circumstances to oblige you to clean sections while the glue is soft, but I feel pretty sure you would get along twice as fast if you would do the work when the glue is brittle. The soft glue falling on the face of a section and sticking there is a thing that never occurs here, and it's ever so much easier to scrape off dry, brittle glue than the sticky stuff.

Now after all I've said in favor of the T-super, I advise you to go slow and try it on a small scale before you think of investing much in that direction.



Good Prospects for Honey

My bees have wintered very well and are at present very busy gathering pollen and maple sap, but no flowers are yet to be seen. The thermometer was up to 80 degrees above zero in the shade for nearly 4 days in March, when a sudden change came and the thermometer went down to nearly zero. April started in pretty cool, but it is getting warmer every day, with a little rain. Everything is getting green up here, and prospects are for a good honey-year.

B. F. SCHMIDT.

North Buena Vista, Iowa, April 4.

Unfavorable Weather

I took my bees out of the cellar April 3, after a confinement of 4 months. I found 3 colonies dead out of 55. The weather since then has been quite cold, cloudy and windy. Today it is freezing, with a high northwest wind, and "spitting" some snow. It is rather unfavorable weather for bees or farm work.

Riceville, Iowa, April 8. A. F. FOOTE.

Ventilation in Wintering Bees

My bees swarmed very little last year, and gave me very little surplus. As it was cold and wet the bees did not build up in time for the clover. They used most of the honey for brood-rearing, but they went into winter-quarters in good condition. I dug them out of 4 feet of snow on March 13, and they had a good flight, so I think they will come out all right.

I read a good deal in the American Bee Journal about ventilation in out-door wintering. In moving my bees into the winter boxes, I close the entrance with a piece of tin

with 5 small holes, so small that a bee can not get its head through. In putting the bees into winter quarters a couple of years ago, I missed taking one of the tins out, and they were closed up 5 months. When I came to take them out I found the tin there. I thought surely they would be dead, but when I opened them I found they had wintered the best of any in the yard. So much for ventilation. I may say that they had a little upward ventilation, as had all the rest.

Clarksburg, Ont. EDWARD KNOLL.

First Spring Pollen Record

The weather is warm. I have some losses of bees, but not heavy except in 2 groups numbering 14 colonies, which I let go into the winter in a quite unusual way.

The first pollen was brought in yesterday. The following is the first pollen-gathering record for 28 springs:

1880....March 30	1894....March 17
1881....April 14	1895....April 5
1882....March 2	1896....April 11
1883....April 10	1897....April 18
1884....March 27	1898....March 21
1885....April 20	1899....April 12
1886....April 12	1900....April 7
1887....April 9	1901....(?)
1888....April 5	1902....March 23
1889....March 22	1903....March 17
1890....April 8	1904....(?)
1891....April 2	1905....March 26
1892....April 3	1906....(?)
1893....March 31	1907....March 26

Of the first 13 there were only 4 in March; the last 13 have 7 in March. So the notion that the springs are later now don't amount to much.

Toledo, Ohio, March 27.

E. E. HASTY.

Rearing and Mating Queens

Last season with one colony I reared 47 queens in 90 days. This colony built all the cells, nursed all the cells till the queens were hatched, and nursed all the young queens till they were mated with the drones. I tested a good many queens and I made an increase of 3 colonies from this colony, and this spring the colony is one of my best. I am getting this colony ready now to rear queens this season.

If I would have the time in August and September to rear queens, I could rear 100 queens with a single colony in only one season, and the colony would do all the work. With my method I need not make nucleus colonies, nor break up a colony. With this method of rearing queens you can find out how many queens will meet more than one drone. The last lot of queens I reared last season I watched closely to see how many queens would meet more than one drone, and out of 11 queens 6 queens met 2 drones each. I had one queen that met 3 drones.

The 3 queens I received as premiums last July are fine queens, and are better than I expected to get. The 3 queens breed nice bees. I am so well pleased with one of the queens that I will use her as a breeder this season. She is leather-colored, and her bees are the same, and are uniform in bands.

JACOB F. HERSHEY.

Lancaster Co., Pa., April 8.

Alsike for Bee-Pasturage

I wish to answer a question asked last spring about this time in Gleanings. The questioner lived in Iowa, and asked the question: "What shall we plant or sow for bee-pasturage?" The same answer that would be true then is true now. There is nothing better than alsike or Swedish clover. It makes as fine honey as white clover or as sweet clover. And no other clover makes as fine hay for any kind of stock as alsike. All kinds of stock like it, and will eat all of the stems up. Then the second crop comes in good play for fall honey.

We sow nothing in the clover family but

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alsike. Some people get the impression that alsike and alfalfa are the same thing, but this is a mistake. Alsike must be sown with timothy, as the stems of the alsike are so limber it can not stand alone. It can be sown in the spring with the small-grain crop.

I have just received the March numbers of the American Bee Journal, and it seems as if an old friend has come to see me. The heading on the outside says 47th year. Forty-one years ago last fall I traded my old musket, that I brought home with me, for my first colony of bees, and it was up and down with me (down most of the time) until Thomas Chantry recommended me to take some good bee-paper. So I took the American Bee Journal, and from that time on I made better success, but I had a great many failures. I always tried to do better next time.

Menlo, Iowa.

O. P. MILLER.

Bees and Honey in Montana

Bees are doing fine here. I have 35 colonies which I run for comb honey. I got 100 pounds of honey from each of some colonies, and the queens I got from you did better yet. I rear my own queens now and want nothing better.

I get 25 and 30 cents per pound for comb honey, and \$10 to \$15 per colony for bees. I winter them outdoors. I have 4 colonies in one tenement house, but do not like it as well as a single chaff hive. My main honey-flow is from wild roses.

I clipped my queens March 23 and found one dead out of 35. For experiment I left 2 supers of honey on. The honey was extra-fine, but the bees are dead.

FRED HOFFMAN.

Lewistown, Mont., March 26.

Queens By uniting swarms Supplies

I sell queens at—1 queen, 25c; doz., \$3. Also following supplies at 1/2 Root's prices: 1000 P. & I. fences; 1000 plain section-holders; 1000 4 1/4 x 4 1/4 plain sections; Daisy foundation fastener; 10-inch foundation mill; 200 10-frame wood-zincs; 2 doz. Porter escapes; 500 Hoffmann frames. **R. M. SPENCER.**
4A16t Nordhoff, Cal.

TAYLOR'S STRAIN OF ITALIANS IS THE BEST

Long Tongues and Golden are best of honey-gatherers; is yrs. a specialty, breeding for best honey-gatherers. Untested, 75c, or \$3 a doz.; Tested, \$1. or \$10 a doz.; Select Tested, \$1.50. Breeders, very best, from \$3 to \$5. Carniolans same price. Try them. We also sell Nuclei and full colonies. Bees in separate yards. Safe arrival guaranteed.

J. W. TAYLOR & SON
BEEVILLE, Bee Co., TEXAS.

13A10t

70 Colonies of Bees For Sale Cheap

In large quantities, \$3.00 per colony, and \$3.50 in small lots. The bees are in 10-frame Langstroth hives, and in excellent condition.

13A4t G. PROGNOW, Mayville, Wis.



Metal Mothers

Complete fireproof Hatching and Brooding Plant for \$7.50. 2 quarts oil will hatch and brood 50 chicks. Our nest system is the latest discovery. Full line Poultry Supplies. Lowest prices. FREE Catalog. Write today. CYCLE HATCHER CO., Box O, Keeseville, N. Y.

QUEENS FOR YOU

Golden, Carniolan, Caucasian, and 3-band Italians—your choice. Prices: Untested, \$1; Tested, \$1.25. Prices on large quantities or on Bees given on application. Address,

NEW CENTURY QUEEN-REARING CO.

JOHN W. PHARR, Prop., Berclair, Texas.

12A1f Please mention the Bee Journal.

We will Buy and Sell

HONEY

of the different grades and kinds. If you have any to dispose of, or if you intend to buy, correspond with us.

We are always in the market for

Beeswax

at highest market prices.

Hildreth & Segelken

265 & 267 Greenwich Street
NEW YORK, N. Y.

Mention Bee Journal when writing.

ITALIAN QUEENS

Golden or Leather Colored. One colony of this strain produced 280 fancy sections in one season. Order now for delivery in season. Untested Queen, 1.00; six, \$5.00. Tested, \$1.50 up. Correspondence solicited.

ROBERT B. MCCAIN,

2A1f OSWEGO, ILL. R.D. 1.

Please mention Bee Journal when writing advertisers.

TEXAS QUEENS

The Famous Honey-Producers



Texas Queens

The Famous Honey-Producers

I am booking orders now for April, May and June delivery, for Carniolans, Italians, and Golden—equal to the best, regardless of price. PRICES:

Tested Queens \$1.00 each; \$10.00 per doz.
Warranted75 " 7.00 "
Untested50 " 5.50 "

6A1f GRANT ANDERSON, Sabin, Texas.

BIG STOCK

DOVETAILED HIVES,

Sections, etc. I sell Marshfield Mfg. Co.'s and Root's SUPPLIES at factory prices. 8-frame, 1/4-story, \$1.35; 10-frame, \$1.50; No. 1 Sections, \$4; No. 2, \$3.50. Send for 48-page price-list if you haven't one. With an order amounting to 15 or over I give 7 percent discount till May 10.

S. D. BUELL, Union City, Mich.

16A2t Please mention the Bee Journal.

Carniolans ! Italians !

FOR SALE

No disease. 2-comb Nucleus, with Queen, \$3, f.o.b. express office here.

A. L. AMOS, Comstock, Nebr.

12A1f Please mention the Bee Journal.

THE AMERICAN FOOD LABORATORY

E. N. EATON, M.Sc., Chemist.

4 years State Chemist, Minnesota.

6 years State Analyst, Illinois.

1235-1248 Caxton Building,

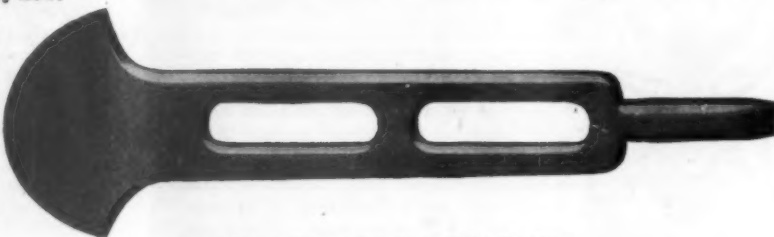
334 Dearborn Street, Chicago, Ill.

Samples of Honey analyzed. Correspondence solicited.

Something New=The Ideal Hive-Tool

Bee-keepers have long needed a special Tool to work among the hives during the bee-season. The one shown here was invented by Wm. Muench, a Minnesota bee-keeper, some years ago, but it was not on the market before. We have lately bought this Tool, and all rights, from Mr. Muench's widow, and have had the first lot made. They are ready for delivery now.

Best Hive-Tool



Only 30c. by mail

(This picture is exactly one-half the size.)

DESCRIPTION.—The Ideal Hive-Tool is made of high-grade malleable iron, much like wrought iron, 8 1/4 inches long. The middle part is 1 1/2 inches wide and 7-32 thick. The smaller end is 1 1/4 inches long, 1/2 inch wide, and 7-32 thick, ending like a screw-driver. The larger end is wedge-shaped, having a sharp semi-circular edge, making it almost perfect for prying up covers, supers, etc., as it does not mar the wood.

What Dr. Miller and Miss Wilson Say of It:

In the first edition (1903) of Dr. Miller's "Forty Years Among the Bees," page 58, he says: "Of all the hive-tools I have tried, I like best the Muench tool." On Jan. 7, 1907, he wrote us saying he thought "just as much of the tool as ever."

Miss Wilson, Dr. Miller's assistant, says this of the Ideal Hive-Tool: "It is an ideal tool. In fact, I don't see how it could be improved upon. I am sure we would feel utterly lost in the apiary without it. You will have to try one yourself if you want to know its worth."

The "Ideal Hive-Tool" Free as a Premium.

We will mail an Ideal Hive-Tool FREE as a premium to any present paid-in-advance subscriber to the American Bee Journal, for sending us ONE NEW subscription for a year at \$1.00; or we will send the American Bee Journal one year and the Ideal Hive-Tool—both for \$1.20. Price of the Ideal Hive-Tool alone, postpaid, 30 cents. Address,

GEORGE W. YORK & CO., 334 Dearborn Street, CHICAGO, ILL.

American Bee Journal



Standard-Bred Italian FREE PREMIUM QUEENS

We are booking orders now for those Fine Untested Italian Queens that we offer every year **FREE** to paid-in-advance subscribers as premiums for getting **NEW** subscribers for the Weekly American Bee Journal. These orders are taken for May or June delivery.

What Some Say of our Standard-Bred Italian Queens:

George W. York & Co.:—The two queens received of you some time ago are fine. They are good breeders, and the workers are showing up fine. I introduced them among black bees, and the bees are nearly yellow now, and are doing good work. **A. W. SWAN.**
Nemaha Co., Kan., July 15.

George W. York & Co.:—After importing queens for 15 years you have sent me the best. She keeps 9½ Langstroth frames fully occupied to date, and, although I kept the hive well contracted to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week. **CHAS. MITCHELL.**
Ontario, Canada, July 22.

George W. York & Co.:—The queen I bought of you has proven a good one, and has given me some of my best colonies. **N. P. OGLESBY.**
Washington Co., Va., July 22

George W. York & Co.:—The queen I received of you a few days ago came through O.K., and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee-keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee-line. **E. E. MCCOLM.**
Marion Co., Ill., July 13.

How to Get these Queens Free

To any one whose own subscription to the Weekly American Bee Journal is paid in advance, we will mail a Fine Standard-Bred Untested Italian Queen next May or June, for each new name and address sent to us with \$1.00 for the Bee Journal a year. No one can get for himself the Bee Journal a year and the Queen for \$1.00. The Queen is offered as a premium for the work of getting some one else to take the Bee Journal a year. If you, yourself, want the Bee Journal a year and the Queen, send \$1.50 for the two, and we will book your order for a Queen. Queen orders will be filled in rotation—"first come, first served."

Address,

GEORGE W. YORK & CO.

334 Dearborn Street, CHICAGO, ILL.



Millions of Dollars

are made every year in the book business. Every family, rich or poor, must have books. During the last few years, \$7,500,000.00 have been expended for Modern Eloquence, \$12,000,000.00 for Stoddard's Lectures, \$2,000,000.00 for the Century Dictionary, and the tremendous sum of \$44,000,000.00, covering over half a million sets of the Encyclopedia Britannica. These books were sold by subscription in American homes and sales are still going on.

We have a subscription publication which sells more readily than any of the above. The demand is already so tremendous that more capital is required to swing it, or get behind on orders. Profits are enormous, several times savings bank interest.

We have arranged a plan whereby Any Progressive Man or Woman Can Share These Profits

becoming stockholders in a profitable business, based on twenty years' experience. Remember, the success of this publication is not away off in the future—it is not prospective, but it is a success at the present time and growing in demand every hour. Sales of this publication at the time of publishing this advertisement

Often Exceed \$2000 a Day

This is an exceptional opportunity for those of small means to get in on the ground floor in a business which legitimately pays large dividends and is as solid as the Rock of Gibraltar. It cannot be held open for long as the response is certain to be so great that we shall have all the capital we need to increase the number of our presses and secure stock to be turned out in completed books, which are selling like wildfire.

You owe it to yourself to investigate this opportunity. You will never have a chance like this again to become

Part Owner in a Mammoth Publishing House

which is already in successful operation, already earning big dividends, and which is led to sell a small amount of its stock simply because the business is already so tremendous as to exhaust the working capital. But if you would grasp this opportunity you must

Write Quick—Only a Few Can Come In

Address your letter to me personally, like this—

W. B. Gilbert
Dept. G 23 Jackson Blvd., Chicago



American Bee Journal

CONVENTION NOTICE.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its spring meeting on Saturday, April 20, 1907, at the Old State Capitol in St. Paul. The afternoon session will commence at 1 o'clock, and the evening session at 6 o'clock. Free refreshments will be served from 5 to 6 o'clock, by the lady members of the Association. A leading feature of the afternoon session will be a practical demonstration of the modern method of queen-rearing, by Chas. Mondeng; and at the evening session the simplest way to cure foul brood. Papers will also be given on, "Spring Management," by Wm. McEwen; "Production of Comb Honey," by Chas. Blomquist; "Shipping Bees and Honey," by Mr. Gent; "Bee-Keeping in Connection with Farming," by Pres. H. V. Poore; "Bee-Keeping for the Beginner," by W. R. Ansell; and a paper by Mrs. E. E. Merrill. Questions on bee-keeping by any one interested will be fully discussed and answered. Lay everything aside and attend this meeting; you will never regret it. We want every one to come, whether a member or not. Brother and sister bee-keepers are all cordially invited. The membership dues are \$1.00 a year, including membership in the National Bee-Keepers' Association.

CHAS. MONDENG, Sec.

Minneapolis, Minn.

Wanted A man to work 250 colonies of bees on shares, or to work by the month for wages. State age, experience, and wages expected, in first letter.

14A3t W. E. FORBES, Plainwell, Mich.

Western Bee-Keepers We Will Show You how to save money. Send for our new catalog of the best Bee-ware made.

THE COLORADO HONEY-PRODUCERS' ASS'N, Denver, Colo.
9A1f Please mention the Bee Journal.

Best No. 1 Sections per 1000, \$4.00; No. 2, \$3.40; plain, 25c less. Discounts on Danz. and Root's hives, and other Root's Goods; also Berry Boxes. Bees for sale.

H. S. DUBY, St. Anne, Ill.

6A14t Please mention the Bee Journal.

WE SELL ROOT'S GOODS IN MICHIGAN Let us quote you prices on Sections, Hives, Foundation, etc., as we can save you time and freight. Beeswax Wanted for Cash.

H. M. HUNT & SON,
Kewford, Wayne Co., Mich.

NORTHERN KING QUEENS

One Untested, 60 cents; 2 for \$1. Tested, \$1 each. Breeders, \$5 each. Mailed June 1st. Orders booked now. Address, B. F. SCHMIDT, R.F.D. No. 1, North Buena Vista, Iowa.

14A2t Please mention the Bee Journal.

BEE-SUPPLIES

Hives, Sections, Comb Foundation, Smokers, etc. Best of goods, reasonable prices, and a "square deal." Send for free catalog.

ARTHUR RATTRAY, Almont, Mich.
12A13t Please mention the Bee Journal.

26 EGGS

from my Choice Strain White Wyandottes, \$1.00

J. F. Michael, Rt 1, Winchester, Ind.

14A4t Please mention the Bee Journal.

ITALIAN QUEENS

That are bred from the best stock this country can produce. Bright Golden and 3-banded Queens ready to ship May 20. I am now booking orders which will be filed and filled in rotation. After May 20 all orders will receive prompt attention. Untested Queens 60 cents each; 6 for \$3.35, or 12 for \$6.50. Tested, \$1.00, or 6 for \$5.50. 2-frame nuclei with Young Queen after June 1, \$2.00.

GEO. W. BARNES,
15A26t Box 340, Norwalk, Ohio.

BEE-SUPPLIES

PERFECT GOODS LOW PRICES

A Customer Once, a Customer Always.

Now is the time for you to buy your Bee-Supplies. We manufacture Bee-Hives of all kinds. The Dovetail, Langstroth, Alternating, and the Massie Hives, we make all of them. Remember that half the work and worry of your apiary is removed when you use our goods. Every one knows the advantage of a good, substantial hive; the quality of material and workmanship in our hives are not excelled by any other make.

We have been in the business over 40 years, and know what is practical, and when you once give our goods a trial you will have none other. Remember that now is the time to get your order in for the season's supplies. Have you received our new 1907 Catalog? If not, write for it at once. You cannot fail to understand how to order just what you want from our Catalog, it is the easiest to understand that you ever saw.

No trouble to give estimates; tell us what you want.

KRETCHMER MFG. CO., Council Bluffs, Iowa.

Muscataine Produce Co., Muscatine, Iowa.

Trester Supply Co., 103 S. 11th Street, Lincoln, Neb.

Catalogs issued in English or German.

ITALIAN AND CAUCASIAN BEES, QUEENS and NUCLEI



Choice home-bred and imported stock. All Queens reared in full colonies.

Prices of Italians in April:

One Tested Queen \$1.65
" Select Tested Queen 2.20
" Breeder Queen 3.30
" Tested Caucasian... 2.00

Untested in May. All others ready now from last season's rearing. Safe arrival guaranteed. For prices on larger quantities and description of each grade of Queens, send for FREE CATALOG.

J. L. STRONG

15A1f 204 E. Logan St., CLARINDA, IOWA.

Mention Bee Journal when writing.

How to Make Money Easy

Restock your apiaries with Atchley Queens; they do the rest. We breed all of the leading races in their purity. Untested, \$1 each; \$9 per doz.; \$60 per 100. Tested, \$1.50 to \$2.50 each; Breeders, \$3 to \$5 each. 1, 2, and 3 frame Nuclei, and bees by the car-load, our specialty. Get our prices before you buy. We manufacture standard bee-supplies cheap. Catalog free. Will exchange queen-bees or bee-supplies for honey. Beeswax wanted at all times.

The Bee & Honey Co.

WILL ATCHLEY, Mgr.

11A1f Box 218, Beeville, Bee Co., Texas.

Mention Bee Journal when writing.

SOLID GOLDEN QUEENS

Ready for delivery April 1st. Select Untested Queens, \$1 each; Tested Queens, \$2; Select Tested, \$3. You can only get good Queens from the South in the early spring. Book your orders NOW.

H. M. PARKER, JR.

3A1f JAMES ISLAND, S. C.

Mention Bee Journal when writing.

Italian ALLEY'S AND PRATT'S Queens

Golden breeders. My own strain 3-banded dark, 1907, Untested, \$1; Tested, \$1.50. Queens mailed soon as weather permits rearing.

16A1t C. D. BENTON, Akin, N. Y.

Bee-Supplies and Berry-Boxes

Lewis B. Ware at Factory Prices. Bee-keepers, club together, send me list of goods wanted, and let me quote you prices. I give the regular discounts. Beeswax wanted. Send for Catalog.

6E1f W. J. McCARTY, Emmetsburg, Iowa.

Mention Bee Journal when writing.

Big Reduction in Supplies

Until May 1. Big stock of Dovetailed Hives and One-Piece Sections to draw from. FREE—a year's subscription with order amounting to \$15 or over. Send for 32-page Illustrated Catalog—free.

W. D. SOPER (Route 3) Jackson, Mich.

28E1f Please mention the Bee Journal.

29 Years Means QUEEN Quality

100 pounds to the colony in a poor year, like last, and 250 to the colony the year before. My Italians are non-swarmer. Every queen purely mated or money back. Circular tells of Italian and Caucasian.

8E1f A. D. D. WOOD, Lansing, Mich.

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Queens

The finest in the land from DANIEL WURTH & GRANT.

3-Banded, Red Clover, and 5-Banded Golden.

The Golden took First Premium at every Fair they

were exhibited last year. Prices:—Untested, \$1.00 each; Tested, \$1.50 each. Address,

DANIEL WURTH & GRANT
PITKIN, ARK.

Make Money Orders payable on West Fork, Ark. I have moved from San Antonio, Texas.—D. W. 6E1t

Italian Bees and Queens

Untested... \$.75 1 fr. Nucleus (no queen) \$1.50
" Select 1.00 2 fr. " 2.00
Tested 1.50 3 fr. " 2.50
" Select 2.00 (No disease.)

E. M. COLLYER
16A1t 75 Broadway, OSSINING, N. Y.

Mention Bee Journal when writing.



YOUR MONEY IS GOOD

You know that. We know that. Every one knows that. If it were not, every one would not be ready to take it. You and you alone must insist on returns, real returns for the good money you spend for bee-supplies. If you don't see to it that you get your money's worth no one will.

NOW WE WANT TO ASK YOU A QUESTION

Do you know that you are losing money—real, hard-earned money—every time you put a colony of bees into a cheap, poorly fitting hive? You are, for the good reason that the bees are spending most of their time building over the hive when they ought to be making honey.

HONEY MEANS MONEY



Thus more than the money that you think you are saving when you buy a cheap hive the bees are losing for you "hand over fist," and you don't know it. It's the fault of the hive.

That's why some bee-keepers get a whole lot more honey than others. That's why the man using the best goods makes the most money when it comes to cashing in at the end of the season. We can prove that. Men can build hives cheaper and better than bees. Then why not have everything just right to begin with?

LEWIS HIVES ARE BUILT RIGHT

DISTRIBUTING HOUSES

ENGLAND—E. H. Taylor, Welwyn, Herts.
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CUBA—C. B. Stevens & Co., Havana, 19 Oficios C. B. Stevens & Co., Manzanillo.
CALIFORNIA—The Chas. H. Lilly Co., San Francisco, 141 Spear St.
SOUTHERN CALIFORNIA—Paul Bachert, Lancaster.
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COLORADO—Colorado Honey-Producers' Association, Denver.
Grand Junction Fruit Growers' Association, Grand Junction.
Robert Halley, Montrose.
IOWA—Adam A. Clarke, Le Mars.
Louis Haussen's Sons, Davenport.
W. J. McCarty, Emmetsburg.
ILLINOIS—York Honey and Bee-Supply Co., Chicago, 191 E. Superior St.
Dadant & Sons, Hamilton.
INDIANA—The C. M. Scott Co., Indianapolis.
MICHIGAN—A. G. Woodman Co., Grand Rapids

MASSACHUSETTS—Alvin A. Vinal, Marshfield Hills.
MINNESOTA—Wisconsin Lumber Co., Minneapolis, 432 Lumber Exchange.
MISSOURI—E. T. Abbott, St. Joseph.
OHIO—Norris & Anspach, Keaton.
OREGON—The Chas. H. Lilly Co., Portland.
PENNSYLVANIA—Cleaver & Greene, Troy.
TEXAS—Southwestern Bee Co., San Antonio, 438 W. Houston St.
UTAH—Fred Foulger & Sons, Ogden.
WASHINGTON—The Chas. H. Lilly Company, Seattle.

G. B. LEWIS CO., "The Original Beeware People" Watertown, Wis.

American Bee Journal

A GREAT IMPROVEMENT

Will be found in

The American Bee-Keeper for 1907

It is profusely illustrated and enlarged, and contains only articles of the most practical as well as scientific nature. A special corps of the best writers has been engaged. The editors are Harry E. Hill and Arthur C. Miller, than whom there are no more practical or experienced bee-keepers in this country. We have published the American Bee-Keeper continually and regularly since 1890.

Regular subscription price, 50 cents a year. One year to new subscribers, 35 cents; three years for \$1.00.

Send for sample copy and our new illustrated price-list of **BEE-SUPPLIES OF ALL KINDS.**

Guaranteed highest quality at lowest price. Address,

THE W. T. FALCONER MFG. CO.
JAMESTOWN, N. Y.

[Established 25 years.]

Mention Bee Journal when writing.

Honey and Beeswax

CHICAGO, April 4.—Market is quite bare of best grades of comb honey. When sales are made it is on a basis of 15¢@17¢, with very little outlet for the off-grades. Extracted, 7¢@8¢; off grades, 6¢@6½¢. Beeswax in good demand at 30¢@32¢.

R. A. BURNETT & CO.

PHILADELPHIA, April 10.—Owing to the cold weather, there has been quite a demand for comb honey in the last 10 days; quite a number of odd lots have been moved in this market, with not so many arrivals as heretofore. We quote: Fancy white comb honey, 15¢@16¢; No. 1, 14¢@15¢; amber, 12¢@14¢. Fancy white extracted, 7¢@8¢; light amber, 6¢@7¢. Beeswax, very firm, 32¢.

We are producers of honey and do not handle on commission. WM. A. SELSER.

NEW YORK, Jan. 15.—The stock of white comb honey is pretty well exhausted, and we do not expect any more arrivals of large lots from now on. Prices are firm, and we quote from 15¢@16¢ for fancy white; 13¢@14¢ for No. 1; 12¢ for light amber. There is quite a little dark and buckwheat on the market, but no overstock, and we think that all of it will be disposed of before long at present prices, which we quote from 10¢@12¢, according to quality. Extracted honey very firm, with sufficient supply to meet demand. California white sage is bringing from 8¢@8½¢; light amber, 7½¢; amber, 6½¢@7¢; buckwheat extracted in fairly good demand at 6¢@6½¢. Southern in barrels finds ready sale at from 55¢@70¢ per gallon, according to quality. Beeswax firm and steady at 31¢.

HILDRETH & SNOELKEN

DENVER, Feb. 14.—Producers in this State are practically closed out of both comb and extracted honey. We have not sufficient good comb honey to supply our local trade, but have a good supply of white extracted of excellent quality. We quote strictly No. 1 white comb honey, per case of 24 sections, at \$3.20; No. 1, light amber, \$3; and good No. 2, \$2.80. White extracted, 8¢@8½¢ per pound; light amber, 7½¢@8¢. Clean, yellow beeswax, 27¢@28¢, delivered here.

THE COLO. HONEY-PRODUCERS' ASSN.

CINCINNATI, Mar. 11.—There is very little demand for extracted honey at this writing, which is only natural, owing to the unsettled

Headquarters for Bee-Supplies

Complete stock for 1907 now on hand.

FREIGHT-RATES FROM CINCINNATI

are the LOWEST, ESPECIALLY for the SOUTH,

as most all freight now goes through Cincinnati.

Prompt Service is what I practice.

You will

Satisfaction Guaranteed.

SAVE MONEY BUYING FROM ME.

Catalog mailed free. Send for same.

A Special Discount on Early Orders.

Let me book Order for

QUEENS

bred in separate apiaries, the **GOLDEN YELLOWS, CARNIOLANS, and CAUCASIANS.**

For prices, refer to my catalog, page 29.

C. H. W. WEBER

CINCINNATI OHIO

Office and Salesrooms, 2146-48 Central Ave. Warehouses, Freeman and Central Aves.

weather at this time of the year. However, we are looking forward with interest to a revival of trade, as soon as the warm spring days are here. We quote amber extracted honey in barrels at 6¼¢@7¼¢, the price depending upon the quantity purchased. Fancy table honey in crates of two 60-lb. cans each, at 8¢@9¢. There is little demand for comb honey owing to the lateness of the season. Choice yellow beeswax, 32¢@35¢, delivered here.

THE FRED W. MUTH CO.

INDIANAPOLIS, April 12.—comb honey is not plentiful, but demand is slack. Fancy white comb brings 16¢@17¢; No. 1 white, 14¢; amber, 12¢@13¢. Best grades of extracted honey bring 8¢@9¢; amber, 6¢@7¢. Good average beeswax sells here at \$35 per 100 pounds.

WALTER S. POWDER.

TOLEDO, Nov. 30.—The market on comb honey remains about the same as last quotations, but has been coming in much more freely, as beekeepers seem to be very anxious to get rid of their stock. Fancy brings in a retail way 16¢; extra fancy, 17¢; No. 1, 15¢; buckwheat, 15¢. Extracted white clover in barrels brings 7¢@7½¢; cans the same. Beeswax, 26¢@28¢.

THE GRIGGS BROS. & NICHOLS CO.

KANSAS CITY, Mar. 30.—The demand for comb honey is light, as also are the receipts. The market is about bare of extracted. We quote: No. 1 white comb, 24 sec. cases, \$3.10 to \$3.25; No. 2, \$2.50 to \$2.75. Extracted, white, 8¢@9¢; amber, 7¢@8¢. Beeswax, 28¢.

C. C. CLEMONS & CO.

CINCINNATI, April 3.—The market on honey is entirely bare of fancy comb honey; No. 2 selling at 12¢, and slow sales. Light amber extracted sells in barrels at 5¼¢@6¢. Beeswax, 32¢, delivered here. C. H. W. WEBER.

HONEY AND BEESWAX

When consigning, buying or selling, consult

R. A. BURNETT & CO.

199 SOUTH WATER ST. CHICAGO, ILL.

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If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send \$1.20 to

Prof. A. J. Cook, Claremont, Cal.,

FOR HIS

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Liberal Discounts to the Trade.

"It is continuous advertising that impresses the public with the stability of a firm."

Please Mention the American Bee Journal when writing Advertisers

BEE SUPPLIES.

We handle the finest bee supplies, made by the W. T. FALCONER MFG. CO., Jamestown, N. Y. Big Discounts on early orders, let us figure with you on your wants.

MUTH SPECIAL DOVE TAIL HIVES, have a honey board, warp-proof cover, and bottom board, think of it, same price as the regular styles. Send for Catalog.

THE FRED W. MUTH CO.,

51 WALNUT ST.

CINCINNATI, OHIO.

THE
CELL
THAT SELLS AND EXCELS
IS FOUND IN
**DADANT'S
FOUNDATION**
DADANT'S FOUNDATION and DADANT'S FOUNDATION
**BEE
SUPPLIES**
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Hamilton, Ill.

Marshfield Bee-Goods

talk for themselves; having bought once, you will buy again. Our orders show that. The reason for this is that nothing is used in the making of our BEE-GOODS that we know is not fit to go in. Why should we when we have plenty of the best as it comes direct from the forest to our mill and factory.

SECTIONS are made of the basswood timber, grown here in the basswood belt of Wisconsin.

DOVETAILED HIVES, of lumber almost clear, made accurate and smooth.

SHIPPING-CASES, strong and neat—nothing flimsy about them.

SHIPPING FACILITIES THE BEST

You will get your orders sent on very short time, as we are located on three direct railroads to Chicago, there connecting with the trunk lines for the East, South, and Southwest, and some parts of the West. The West by way of St. Paul and Minneapolis.

If you have not yet received our Catalog of BEE-SUPPLIES for 1907, just write for it.

MARSHFIELD MFG. CO., Marshfield, Wis.

Some of Our Dealers Who Handle Marshfield Bee-Goods:

IOWA—J. W. Bittenbender, Knoxville.
Gregory & Son, Ottumwa.
KANSAS—S. C. Walker & Son, Smith
Center.
MICHIGAN—Lengst & Koenig, 127
South 13th St., Saginaw, E. S.
S. D. Buell, Union City.

NEBRASKA—Collier Bee-Supply Co.,
Fairbury.
CANADA—N. H. Smith, Tilbury, Ont.
ARIZONA—H. W. Ryder, Phoenix.
MINNESOTA—Northwestern Bee-Sup-
ply Co., Harmony.

ILLINOIS—D. L. Durham, Kankakee.
OHIO—F. M. Hollowell, Harrison.
TEXAS—White Mfg. Co., Blossom.
WISCONSIN—S. W. Hines Mercantile
Co., Cumberland.
J. Gobell, Glenwood.